

REMARKS

Upon entry of the present amendment, the only claims remaining in the application are amended claims 1 and 5.

The distinct feature of the present invention is using the extrusion method for granulation and adapting the disintegrant for solving the problems of absorption of paraquat by the extender, for example, clay. The products obtained by the extrusion method of the present invention contain only granules type without the content of any powder, which result in safety in inhalation poisoning from scattering powder.

CLAIM REJECTIONS - 35 USC § 102

Original claims 1-4 are rejected under 35 USC 102(b) as allegedly being anticipated by Yamashita et al US 4,764,206.

Applicant respectfully traverses this rejection based on the reasons set forth hereinbelow, especially in view of claim 1 as currently amended.

Yamashita et al discloses a herbicidal composition as a wettable powder comprising paraquat dichloride, polyvinyl pyrrolidone, white carbon and a surfactant.

However, the Yamashita et al composition does not disclose the use of a disintegrant (breakage promoter), and does not disclose applicant's method of drying the crystals.

The Yamashita et al composition comprises the paraquat salt in a substantially solid state and a thickening agent incorporated therein and the composition becomes a sprayable liquid form. The method is accomplished with a so-called fluid bed method for granulation.

On the other hand, the present invention uses an extrusion method for granulation, and adapts a disintegrant (breakage promoter) for solving the problems of absorption of paraquat by the extender, for example, clay.

In addition, it is respectfully submitted that the components recited in the currently amended claim 1 are not disclosed or anticipated by Yamashita et al.

CLAIM REJECTIONS – 35 USC § 103

The last OA rejects original claims 1-5 under 35 USC 103 as being unpatentable over Tadayuki et al US 5,668,086 in view of Yamashita et al US 4,764,206 further in view of White et al US 3,931,137.

Applicant respectfully traverses the 35 USC 103 rejection of the original claims 1-5 based on the reasons set forth hereinbelow, especially in view of the currently amended claims 1 and 5.

Tadayuki et al discloses an herbicidal composition comprising paraquat, an anionic surfactant, and a chelating agent.

However, the composition does not have a disintegrant (breakage promoter); and the Tadayuki et al extender and anionic surfactant are different than that of the currently amended claims 1 and 5.

The Tadayuki et al. herbicidal composition is provided in the preferable form of a solid, such as powder or granules, or an aqueous dispersion of high concentration and diluted it with water at the same time so as to sprinkle the diluted composition (Tadayuki et al., col. 4, lines 61-67). Especially, the Tadayuki et al. herbicidal composition sample was sprayed on crab grass by means of a spray gun in Example 1 (Tadayuki et al., col. 5, lines 53-55). Therefore, Tadayuki et al. still has a problem in stability.

On the other hand, the products obtained by the extrusion method of the present invention contain only granules type without any content of powder, which result in safety from inhalation poisoning of scattering powder.

The distinctions of currently amended claims 1 and 5 over Yamashita et al are already set forth hereinabove and are incorporated herein by reference thereto.

White et al discloses a solid complex of an herbicidal bipyridylium salt in combination with urea or thiourea.

White et al also discloses the process of preparing an herbicidal composition containing bipyridylium salt and urea that is dissolved in a solvent, such as water, to give a solution. Thus, the White et al solution yields crystals of the herbicide by a recrystallization technique.

However, White et al is strictly different from the present invention.

First, White et al does not disclose a disintegrant and an extender.

Secondly, the use of urea or thiourea as a surfactant is excluded from currently amended claims 1 and 5.

Thirdly, Example 11 of White et al results time of assessment after spraying of bipyridylium urea complex for 6 weeks, the results show the bipyridylium urea complex gave approximately the same level of control as the uncomplexed bipyridylium salt initially, but the former persists for a longer period.

In contrast, less than 2% of Paraquat in the water dispersible granule prepared according to the present invention was decomposed even after 32 weeks of storage under the harsh condition of 50°C in Table 7 (see applicant's specification page 14).

In view of the foregoing, applicant respectfully submits that currently amended claims 1 and 5 are not obvious over Tadayuki et al in view of Yamashita et al, in further view of White et al.

Unexpected Results: The results achieved by the invention as defined in currently amended claims 1 and 5 are new, unexpected, superior, disproportionate, unsuggested, unusual, critical and/or surprising.

Assumed Unworkability: Up till now, those skilled in the art thought or were skeptical that the techniques used in the present invention as currently claimed were unworkable or presented an insuperable barrier.

Assumed Insolubility: Up till now those skilled in the art thought or found the problem solved by the present invention to be insoluble. That is, the present invention converts failure into success. The failures of prior art workers indicates that a solution was not obvious.

Crowded Art: The present invention is classified in a crowded art. Therefore, a small step forward should be regarded as significant and patentable.

Unsuggested Modifications: The cited art lacks any suggestion that any of the cited references should be modified in a manner as suggested in the last OA.

Poor References: The cited references are conflicting, and, therefore, are weak and should be construed strictly and narrowly.

Lack of Implementation: It is respectfully submitted that if the present invention as currently claimed was in fact obvious, because of its advantages, those skilled in the art surely would have implemented it by now. That is, the fact that those skilled in the art have not implemented the present invention, despite its great advantages, indicates that it is not obvious.

Solution of Long-Felt and Unsolved Need: The present invention solves a long-felt, long-existing, but unsolved need.

Contrarian Invention: The present invention is contrary to the teachings of the cited art; that is, the present invention goes against the grain of what the cited art teaches.

Strained Interpretation: It is respectfully submitted that the last OA makes a strained interpretation of the cited art which could be made only by hindsight after having been exposed to what applicant teaches in the present patent invention.

New Principle of Operation: The present invention utilizes a new principle of operation. Applicant has blazed a trail, rather than followed one.

No Convincing Reasoning: It is respectfully submitted that the last OA does not present a convincing line of reasoning as to why the subject matter as a whole, especially as defined in the currently amended claims 1 and 5, including its differences over the cited art, would have been obvious.

Unsuggested Combination: The cited references do not contain any suggestion (express or implied) that they be combined, or that they be combined in the manner suggested in the last OA.

References Are Individually Complete: Each cited reference is complete and functional in itself, so there would be no reason to use parts from or add or substitute parts to any other cited reference.

References Take Different Approaches: The cited references take mutually exclusive paths and reach different solutions. Since the cited references teach away from each other, it would not be logical to combine them as suggested in the last OA.

References Teach Away: The cited references themselves teach away (expressly or by implication) from the combination that is suggested in the last OA.

Modifications Necessary: It is respectfully submitted that it would be necessary to make modifications not taught in the cited art, in order to combine the cited references in the manner as suggested in the last OA.

Claimed Features Lacking: It is respectfully submitted that even if combined, the cited references would not meet the claims as set forth in currently amended claims 1 and/or 5.

Synergism: It is respectfully submitted that the whole (that is, the result achieved by the present invention) is greater than the sum of its parts (that is, the respective results of the individual cited references).

Multiplicity Of References: The fact that three cited references must be combined in the last OA in an attempt to meet the invention is evidence of unobviousness.

In light of the foregoing, applicant respectfully requests reconsideration of the rejections, with a view toward withdrawing same, especially in light of the currently amended claims 1 and 5.

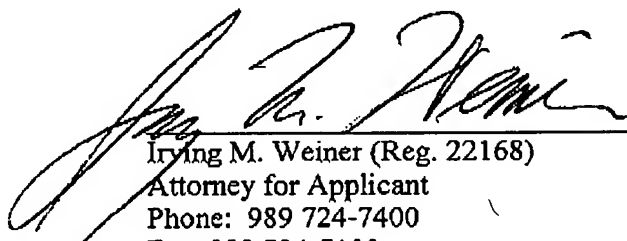
Applicant respectfully submits that the application is now in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner is not yet convinced that the application is now in condition for allowance, it is respectfully requested that the Examiner promptly telephone the undersigned attorney for applicant in an effort to facilitate the prosecution, and/or to narrow the issues for appeal, if necessary.

Favorable reconsideration is respectfully requested.

Respectfully submitted,

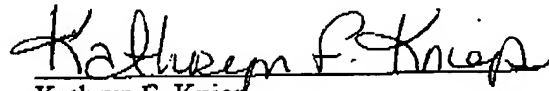
Date: December 8, 2005
Weiner & Burt, P.C.
635 N. US-23
POB 186
Harrisville, MI 48740



Irving M. Weiner (Reg. 22168)
Attorney for Applicant
Phone: 989 724-7400
Fax: 989 724-7100

Certificate of Facsimile

I hereby certify that the foregoing amendment was sent by facsimile to Commissioner for Patents, 571-273-8300 on December 8, 2005.


Kathryn F. Knier